

Orange County Real Time Network



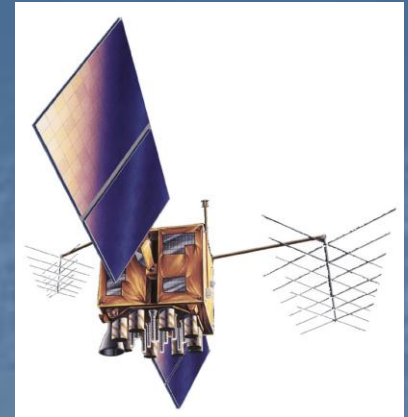
OCR TN

County of Orange, California

Arthur R. Andrew III



OCRTN



- Consists of 10 real time CGPS stations throughout Orange County.
- Stations were part of the SCIGN network.
- Real time data available to anyone at NO cost.
- OCRTN is a sub-network of California Real Time Network (CRTN).

California Real Time Network (CRTN)

- San Diego County (SDCRTN)
- Imperial County (ICRTN)
- Orange County (OCRTN)
- Riverside County (RCRTN)
- Los Angeles County (LACRTN)
- Parkfield (PRTN)
- Central Valley (CVSRN)

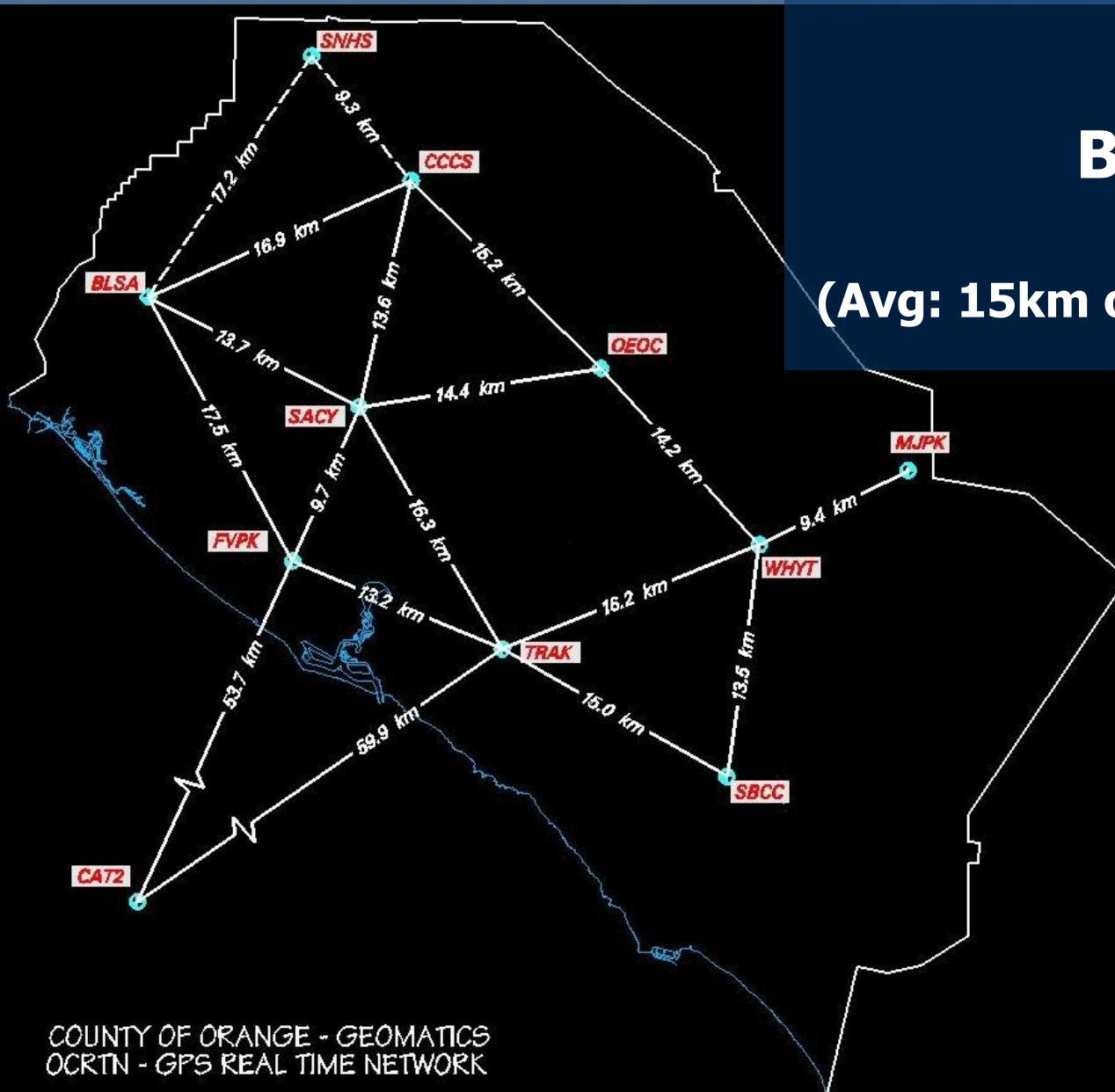


CRTN

OCRTN



OCRTN Baselines Lengths (Avg: 15km or 10 miles)



COUNTY OF ORANGE - GEOMATICS
OCRTN - GPS REAL TIME NETWORK

• - BORN GPS SITE

Typical OCRTN Site



- Deep Drilled Braced Monument

OCRTN - Current RTK Data Streams

- **Single Base Station Mode:**

- Standard RTK using RTCM 2.2. User has ability to pick and choose base station.

- **Nearest Base Station Mode:**

- Standard RTK using RTCM 2.2. Server picks the closest base station to the rover position.

- **Network Solution:**

- Requires user to have proprietary software.

OCRTN - Datum & Epochs

OCRTN Server

NAD 83

1991.35 Epoch

CRTN Server

NAD 83

2007.00 Epoch

All 10 stations were included in the NAD 83 (NSRS)
National Readjustment.

Station TRAK is part of the NGS CORS network.

www.ocgeomatics

County of Orange, Public Works - OC Geomatics/Land and Information Systems - Geodetic Control/OCRTN - Mozilla Firefox

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http://www.ocgeomatics.com/gls_services_geodetic.asp

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- Addressing in OC Unincorporated Areas
- Boundary Annexations
- Contract Administration
- Field Surveys
- Geodetic Control/OCRTN
- Geographic Information Systems
- Landbase Information Systems
- Lot Line Adjustments
- Research & Public Assistance
- Street Name Changes in OC Unincorporated Areas
- Subdivision Map Checking Processing
- Right of Way Engineering

Geodetic Control


The Geodetic Unit is responsible for maintenance of the Horizontal and Vertical control networks. Responsibilities include updating, revising and distributing the most accurate and current data available. Reports are prepared for subsidence and deformation surveys. Control maps are prepared for scour, construction, and aerial control surveys.


To research Geodetic Control, please go to <http://www.ocgeomatics.com/landrecords/>.

OCRTN

The Orange County Real Time Network (OCRTN) consists of 10 continuously operating GPS reference stations (CGPS) located in and around Orange County. These CGPS stations are part of the California Spatial Reference System (CSRS) and the California Real Time Network (CRTN). OCRTN CGPS stations sample data at a 1 Hz interval (every second) and the raw data is streamed in real-time to a server located at the Geomatics office in Santa Ana. All sites contain GPS dual-frequency receivers with Geodetic choke ring antennas. This raw data along with generated RINEX files are archived for each site in 24-hour files and can be downloaded at the [Scripps Orbit and Permanent Array Center](#). For specific epoch interval requests, please contact Art Andrew @ (714) 834-3804.

At the same time, RTCM type 18, 19, 3, 22 messages are generated from each CGPS station and can be used for RTK surveying and are available to anyone at no cost. Users can access this data via the Internet using TCP/IP by using a wireless data modem. These data streams can be accessed from two different locations, the Geomatics office and the CSRC office. IP addresses and port assignments can be found by downloading the [Procedures for Using OCRTN](#) document.

 Click here to view an image of the Orange County Real Time Network.

 Click here to go to the CSRC California Real Time Network (CRTN).


For more information or if you would like to receive information and notifications related to OCRTN, please send your email address to: Art.Andrew@rdmd.ocgov.com.

OCRTN Related Downloadable Documents - PDF files unless otherwise noted.

- Procedures for Using OCRTN
- OCRTN Components
- OCRTN POB Article August 2003
- OCRTN for CSRC Real-Time Symposium

Santa Ana River Calibration Base Line

BASELINE OBSERVATIONS JUNE 2006



Santa Ana River Calibration Base Line

The Santa Ana River Calibration Base Line was established in 1972 and is maintained by the Orange County Surveyor. It is located on the east bank of the Santa Ana River between Lincoln Avenue and Ball Road, in the city of Orange. It was designed for calibration of EDM equipment and is available to the private and public companies and agencies without charge.

In cooperation with the National Geodetic Survey (NGS), the SAR calibration base line is now part of the NGS EDM Calibration Base Lines. The base line was re-measured in June 2006 by the G/LIS Geodetic Unit after being trained by the NGS in using their equipment and procedures.

Click here to download the ["Santa Ana River Calibration Base Line" form](#).

Done

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http://sopac.ucsd.edu/projects/realtime/

CRTN: California Real Time Network - Mozilla Firefox

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CRTN: California Real Time Network

Overview

- Welcome to the Web Page of the California Real Time Network (CRTN). Please read the following links before using CRTN data and data products:
[Description](#) | [Access to Data](#) | [Funding](#) | [Disclaimer and Usage Guidelines](#) | [References](#) | [Presentations](#)

Map - Current CRTN Status (Updates automatically every 5 minutes)
Active RTGPS Stations - Blue up Red down Planned Stations: Grey

Basemap:

- Basic: Suitable for all scales
- Relief: Down to 2500000
- Imagery: 15000000 : 15000000
- DRG: US only 300000 : 24000

Current scale: 5000000

Real Time Sub-Networks

- CRTN is a collaboration of efforts in [Orange County](#), [Riverside County](#) (Metropolitan Water District), [San Diego County](#), [Imperial County](#), [Los Angeles County](#) (USGS Pasadena and others) and the [Central California Valley](#). Click on the labels below to zoom in on the different sub-networks, or view the [entire network map](#).

Southern California

Caltrans Districts

Done

start

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